REMARKS

Claims 1-52 are in the application. Claims 1-13 and 16-28 were allowed. Claims 14-15 and 29-52 were rejected under Section 102 or 103 in view of Yang or Negi or Yang in combination with Spinney or Andruzzi. Applicant submits that the pending claims, as amended in the prior amendment, are readily and patentably distinguishable from the cited references, either considered alone or in combination.

Applicant initially wishes to note that Applicant had some uncertainty with respect to the last office action. Applicant noted that the claim language of the rejected claims cited by the Examiner in the body of the office action appeared to quote language of the claims prior to the August 1, 2000 amendment, and not the claims as amended in the August 1, 2000 amendment. Given the reissue application amendment format, and the length of the claims, however, the amendments and their significance may not have been fully appreciated by the Examiner. Accordingly, in this amendment Applicant is highlighting the amendments that were made and explaining why Applicant maintains that the subject claims as amended patentably distinguish over the cited references.

The present invention as defined in the claims at issue (i.e., claims 14-15 and 29-52) generally is directed to methods for establishing a communication protocol for a link between first and second data sources/sinks. In accordance with the claimed invention, data pulses are transmitted or exchanged between the data sources/sinks, wherein electrical characteristics (e.g., pulse period or other electrical characteristics of the pulses, etc., as opposed to data conveyed by the pulses in accordance with an established protocol) are indicative of the communication protocol capabilities of one or the other data sources/sinks, etc. With such electrical characteristics-data pulse transmission or exchange, for example, network link endpoint capabilities may be detected, and a communication protocol may be determined or "negotiated" (or reconfigured, etc.) on the basis of the electrical characteristics of the data pulses. Thus, and still for example, in general information regarding the protocol capabilities of the data sources/sinks may be determined on the basis of the electrical characteristics of the data pulses, and without requiring, for example, the exchange of messages or data after one form of communication link has already been established.

This perhaps can be most readily understood by contrasting the foregoing with the teachings of the Yang reference, which was the primary reference cited by the Examiner. Yang discloses a

"CSMA/CD" type Ethernet protocol for determining whether the link supports either full or half duplex communications. This may be carried out on the basis of a "request message" or "start message", etc., after initially communicating in a half duplex mode (see, e.g., the detailed description beginning at col. 8, line 34). In accordance with the Ethernet protocol cited in Yang, however, the link has already been electrically established, and full or half duplex communications may be selected based on such request messages, etc.

In contrast, it is very clear that the Yang full/half duplex communication determination is not made on the basis of electrical characteristics of data pulses as in Applicant's claimed invention, where the electrical characteristics of the data pulses may be used to convey protocol capability information. As one example of the benefits achieved with Applicant's invention which is not possible with the Yang reference (which is a significant differentiation over Yang), with Applicant's invention a communication protocol may be established with information conveyed by the electrical characteristics of the data pulses, which may be detected from the physical medium under control of a state machine coupled to the link; Yang, on the other hand, requires that the link already be established, and then exchanges special messages over the link, thus requiring a MAC (media access control) address (or equivalent) and requiring operation at a different level than Applicant's data pulses.

Thus, Applicant submits that Yang is readily distinguishable from the claimed invention.

Applicant further notes that the Spinney reference, which was combined with Yang to reject certain dependent claims, does not disclose or suggest Applicant's electrical characteristics-data pulse method, and otherwise does not disclose what Yang is lacking.

Negi (only claim 15 was rejected in view of Negi) is likewise readily distinguishable. Negi relates to the selection of half duplex (i.e., no error correction) or full duplex (i.e., with error correction) facsimile transmission. While not relating to network protocol capabilities in general, Negi requires a modem-type connection be established, and then a string of 0's (i.e., "training check signal") are sent to a receiving station; while monitoring the string of 0's, if the receiving station can receive facsimiles using error correction, then an ACK signal during the sending of the training signals (see, e.g., col. 4, lines 34-63). While Negi discloses other embodiments, the full/half duplex (error correction/no-error correction) facsimile determination is carried based on similar principle, which are submitted to neither suggest nor disclose the use of the electrical characteristics of data

pulses as in Applicant's invention, wherein the electrical characteristics of the data pulses convey information regarding communication protocols, etc. The very different scheme of Negi, which was directed to facsimile transmissions, is submitted to be patentably distinguishable from Applicant's claimed invention.

The addition of the Andruzzi reference, newly cited in the last office action, does not provide what the other references are lacking. Andruzzi relates to a "hybrid ASK/FSK data encoding and transmission scheme" (see, e.g., col. 1, lines 35-51). Andruzzi relates to what he perceived was a "better, more error-free data encoding and transmission scheme for private data networks utilizing a variety of transmissions media – particularly, noisy media" (see, e.g., col. 1, lines 24-27); Andruzzi does not appear to relate to the use of the electrical characteristics of data pulses through which, for example, network link endpoint capabilities may be detected, and a communication protocol may be determined or "negotiated" (or reconfigured, etc.) on the basis of the electrical characteristics of the data pulses. Thus, Andruzzi does not, for example, disclose the use of electrical characteristics of data pulses for exchanging information regarding the protocol capabilities of the data sources/sinks, particularly in a manner in which they may be determined on the basis of the electrical characteristics of the data pulses, and without requiring, for example, the exchange of messages or data after one form of communication link has already been established.

Thus, Andruzzi does not disclose or suggest what the other references are lacking, and thus Andruzzi, whether or not combined with the other references, does not render Applicant's invention obvious.

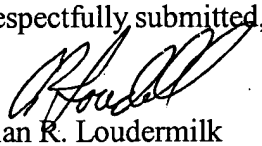
In summary, Applicant submits that the previously rejected claims, particularly as clarified with the amendments previously made, are allowable over the art of the record, whether considered alone or in combination.

Applicant further wishes to note that it has corrected in the August 1, 2000 amendment a typographical error found in claim 23 ("isochronouse" should be "isochronous").

No new matter has been added. If there are any questions regarding this amendment, Applicant's attorney requests an opportunity to discuss such questions with the Examiner by way of a telephone interview.

Please charge any additional fees due, or credit any overpayment, to Deposit Account No. 50-0251.

Respectfully submitted,



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I hereby certify that the foregoing along with the documents referred to as enclosed therein are being deposited with the U.S. Postal Service, with sufficient postage prepaid, in an envelope addressed to the Assistant Commissioner for Patents, Washington, D.C. 20231, this 9 th day of April, 2001.